

"Kill the Rat!"

The U.S. Government's
Nation-wide Campaign
Against a Dangerous
Disease-
Carrying
War Enemy
That Takes a
Billion Dol-
lars Worth of
Food a Year
Out of
Our Mouths

By Rene Bache.

THE common brown rat is one of our most dangerous enemies in the present war.

While we are making every effort to defeat the Germans and using up our income and resources in the struggle, we are allowing the rat to do us as much material damage every year as 200,000 German soldiers could do.

The United States Government has recognized the gravity of the rat plague. For the first time it has used a pictorial poster in disseminating a public warning. It has sent out one broadcast entitled, "Kill the rat!" It states the immense amount of damage done to foodstuffs and property and announces that information concerning the best methods of rat killing and rat-proof building will be furnished on application to the United States Department of Agriculture, Bureau of Biological Survey, Washington, D. C.

The great deadly fact is that there are upwards of 200,000,000 rats in the United States and that each rat destroys on the average \$5 worth of foodstuffs a year without counting other property.

That means \$1,000,000,000 worth of foodstuffs a year wasted. We are trying to feed the allies and paying ruinous prices for our own food, and at the same time we are letting the rats destroy \$1,000,000,000 worth of the finest human foodstuffs.

Every year the rats eat up one third of the first Liberty Loan—which was \$3,000,000,000—and we have nothing left to show for it.

The Government shows that to produce the food destroyed by rats annually requires the labor of 150,000 farmers and farm workers. No single farmer devotes his entire time to the rats, but the labor wasted is equal to the entire time of 150,000 of them. In addition it requires the services of at least 50,000 other laborers to replace the damage done by rats to buildings. Thus the total output of at least 200,000 men is continuously required solely to feed and otherwise provide for the filthy, disease-spreading rats.

The fertility of the rat is amazing and terrifying. A female begins to breed at three months and has on the average twelve litters a year and ten rats to a litter.

At this rate one rat in a year would have 210,620 descendants. The rat lives about six years, barring accidents.

David E. Lantz, of the United States Biological Survey, has estimated that two brown rats in three years could have 20,155,392 descendants. If the same rate of progression were kept up for six years the total would run into eighteen figures and there would be more rats than could be accommodated on the surface of the entire globe. That such a thing does not happen is because the rat death rate is high, and must rise, as men realize their danger. Nevertheless, the rats are increasing at an alarming rate.

At present the number of rats in towns is about equal to the human population, which gives us 50,000,000 city rats in the United States. In the country the rats exceed the human population three or four times on account of the abundance of foodstuffs. And it is there that they are increasing most rapidly. Thus the total rat population of the country cannot be less than 200,000,000. Some experts have placed it at 500,000,000.

In addition to hindering our war work at home rats are figuring at the front. Immense hordes of abnormally large and fierce rats add greatly to the miseries of the trenches, attacking the soldiers while they sleep and destroying food and equipment.

Government literature now being distributed shows that rats not only eat up food

of all kinds, but spread horrible diseases and cause fires and interruption of communication by gnawing the insulation of electric wires. In this latter way they may bring about a great military disaster.

It is only the brown rat that is here considered. In the days of our grandfathers this animal was known as the "wharf rat," or "ship rat," for at that period the common rat of the United States was the black rat. But the brown rat, being bigger and fiercer,



Dissecting a Rat for Germs of the Bubonic Plague, the World's Most Deadly Disease Carried Mainly by This Animal.

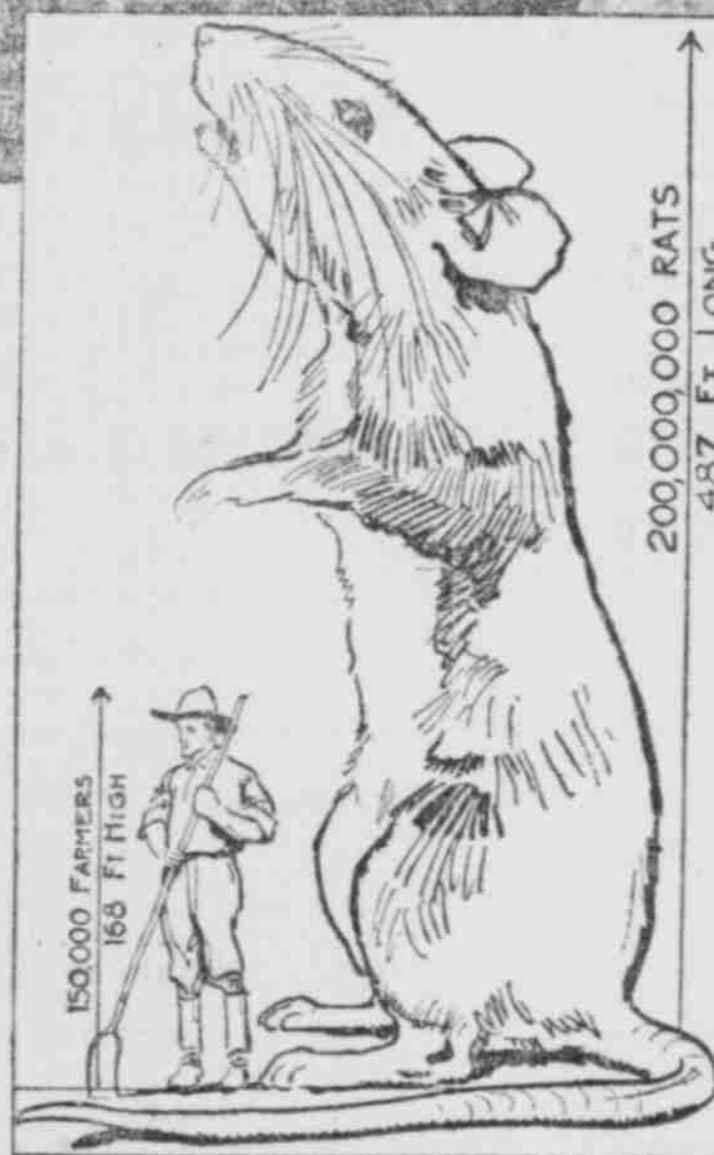
ate up the black rats and drove them out, so that to-day a black rat is rarely seen. For a century and a half the brown rat has been rapidly conquering the world.

We have in this country about twenty species of native rats, but none of them lives in houses or seeks the neighborhood of man. The black rat was an immigrant from the old world, and so likewise was the brown rat at a later period.

The brown rat originated in Asia. It was not known in Europe until 1727, when vast hordes of rodents of this species swam across the Volga. It appeared in this country about the time of the Revolution.

From that time on it spread rapidly over the world, to all parts of which it was carried by ships. To-day there is no country that it does not afflict. Even the remotest islands of the seas suffer from its depredations. In Hawaii the brown rats have taken to nesting in the trees, adopting habits like those of squirrels.

This rat is one of the most ferocious of animals, and, if cornered, will not hesitate to attack man. It has been known to assail



How All the Rats in the Country—200,000,000—Rolled Into One Big Rat Would Compare With the 150,000 Farmers Employed in Feeding the Rats, Rolled Into One Farmer.

helpless infants, kill them, and eat them.

Sturdy, fierce and wonderfully cunning, it is a foot and a half long from snout to tip of tail when full grown and weighs a pound and a half. Occasional giant specimens weigh as much as four pounds.

The brown rat is a strong swimmer. As proved by experiment, if dropped overboard half a mile from land it will soon make its way to the shore. It is also a clever acrobat and has been seen to make its way from house to house over telephone wires.

Its tail has a more complex system of muscles than the human hand. Mr. Rat, in fact, employs it like a hand, being thus enabled to crawl along narrow ledges while using it to balance with and to gain a hold. The tail is prehensile, like a monkey's, and on occasions serves the purpose of a spring, by the aid of which the animal can jump to heights otherwise inaccessible.

Only two mammals are able to maintain themselves anywhere in the world and against all rivals—man and the rat. The genus Homo and the genus Mus go everywhere and eat everything. They are the two creatures that dwell in houses and travel in ships. Ever companions, they wage perpetual war upon each other. Man has fought the rat for thousands of years, and the battle is still drawn.

The newly circulated Government posters speak of the rat as a "spreader of fatal diseases." It is the sole carrier of the most destructive of all human maladies—the "bubonic plague."

This disease, which on two recent occasions has invaded the United States, was for centuries the terror of the old world, epidemics of it carrying off whole populations. One such epidemic, in the fourteenth century, killed half the people in England. In 1907 more than 2,000,000 men, women and children in India succumbed to the complaint.

It is now known that bubonic plague—

the "black death" of the middle ages—is originally a disease of rats. Fleas, deriving the infection from the rats, communicate it to human beings by their bites. Diseased rats make their way from house to house and travel in ships from seaport to seaport, thus spreading the malady.

Another dreadful disease attributable to rats is trichinosis. It originates in rats, among which it is very common. Pigs (whose quarters are commonly invaded by rats looking for food) eat the diseased rod-



Two Effective Rat Traps Recommended by the Government.

By Means of Trap No. 1 3,000 Rats Were Caught in a Warehouse in a Single Night. The Plan Involved Decoying the Rats to the Place and Feeding Them for Several Nights on the Tops of Barrels Covered With Coarse Brown Paper. Afterward a Cross Was Cut in the Paper, So That the Rats Fell Into the Barrel. Large Catches Have Been Made by Trap No. 2 a Barrel Fitted with a Light Cover of Wood, Hinged on a Rod So as to Turn With the Weight of a Rat.

ents now and then, and thus become infected. People eat the infected pork, and, unless it is thoroughly cooked (so as to kill the minute worms called "trichinae"), are liable to die in frightful agony, their flesh being invaded by worms multiplying in countless numbers.

Evidently trichinosis is a very ancient malady, for it was on this account that Moses declared pork to be unclean, forbidding the Israelites to eat it. As a matter of fact today at least one pig in twenty is thus infected, and only our habit of cooking pork very thoroughly saves us from being eaten up by the disease.

At times, in one region or another, rats, owing to specially favorable conditions of food supply and weather, multiply at an abnormal rate, and the damage done by them is enormously increased. On other occasions, for lack of provender, they are impelled to migrate, marching in armies that number millions.

In rural sections, when warm weather arrives, they seek the fields and attack the growing crops. They dig up the new sown grain, destroy it while growing and later attack it in the shock, the crib, the granary, the mill, the elevator, the warehouse, the wharf and the ship's hold.

Nothing that is grown for the use of man is safe from their depredations. They eat fruits and garden vegetables. They rob cattle, horses and poultry of their feed. They are particularly fond of eggs and destroy immense numbers of young chicks, ducks and turkeys. They will even attack little pigs. Often they cause a total loss of crops over wide areas, bringing actual famine.

A commission merchant in Washington

Startling Facts About the Rat Peril

There Are 200,000,000 Rats in the United States.

Every Rat Eats on an Average \$5 of Our Food Yearly.

Rats in the United States Eat Up \$1,000,000,000 of Foodstuffs Annually.

The Rats Keep 150,000 Farmers Occupied Feeding Them.

Other Workers Needed to Repair Rat Damage Number 50,000.

Damage to Property Other Than Food by Rats Is Estimated at \$200,000,000 Annually.

A Government Scientist Calculates That Two Rats Can Have 20,155,392 Descendants in Three Years.

An Indiana Expert Says Every Rat Destroys \$7.30 Property Annually in That State.

"Every year the rats eat up one-third of the First Liberty Loan—\$5 worth of food apiece for 200,000,000 rats yearly."

stored 100 dozen eggs in a covered wooden tub. Rats gnawed their way into it and at the end of two weeks it was discovered that seventy dozen had been carried off without leaving a shell.

A steamer on a twenty-nine-day voyage from India to Antwerp suffered a loss of 40,000 sacks of grain out of 46,000 on board. A packing house in Chicago lost 3,360 hams, eaten by rats, in a twelvemonth.

A hotel lost \$75 a month in linen destroyed by rats. A department store suffered to the extent of \$30 a night by damaged merchandise.

Rats injure buildings, riddling them with holes and undermining the foundations. Many bad fires are caused by rats nibbling matches.

The cleverness of the rat is illustrated by the way in which it handles eggs. To eat an egg it will bite through the shell and nibble off small fragments of the latter, consuming the contents without spilling a drop.

To a rat, a hen's egg is as big a thing to handle as a barrel would be for a man. Yet rats will carry eggs long distances—two of them to each egg. One holds the egg between his paws, passes it to the other, and then runs ahead to receive it in like manner. They adopt the same method in carrying eggs up and down stairs—a truly remarkable performance when one comes to think of it.

Rats are great travelers, and ships are usually infested with them. On board of a vessel they find plenty of hiding places, and in the hold there are food supplies in quantity.

The city of New Orleans was ratproofed not long ago, when bubonic plague had started an epidemic there. The Public Health Service undertook the job, and it was so thoroughly done that very few rats have been seen in that locality since.

It would cost perhaps \$20,000,000 to rat-proof Chicago, but the job would pay for itself in three years by the reduction of losses due to rat depredations.

The sanitary garbage can, with a tight cover, is an important help in getting rid of rats. And it goes without saying that the housewife should protect the contents of her pantry.

The second thing of importance is to deprive the rats of shelter—to render them homeless and thus rob them of the opportunity to breed.

Ratproofing of dwellings and other buildings accomplishes this purpose to a large extent; but it is also necessary to abolish such harboring places as old sheds, piles of brush or old lumber, wooden sidewalks and garbage dumps.

In New Orleans dogs (mostly fox-terriers) lent highly efficient aid in the work of rat-killing, accompanying the gangs of men and pouncing upon every rodent driven forth from its hiding place by poison gas or the destruction of a tumbledown shanty.

Nobody in these days, or in any time to come, should think of putting up a building of any kind without making it ratproof. It costs little and pays for the trifling investment many times over in the course of years. Any one can find out how to do it by writing for information to the Public Health Service at Washington.